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117

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,017	08/26/2005	Werner Mantele	30408/40489	4202
4743 7590 11/06/2007 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER GAWORECKI, MARK R	
			ART UNIT 2884	PAPER NUMBER
			MAIL DATE 11/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,017

Applicant(s)

MANTELE ET AL.

Examiner

Mark R. Gaworecki

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 7-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5,7-13,15-18,20-32,44-46,51,52,60-65,71 and 72 is/are allowed.
- 6) ☒ Claim(s) 14,19,33-43,47-50,53,55,57-59 and 66-70 is/are rejected.
- 7) ☒ Claim(s) 54 and 56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on 29 August 2007 has been accepted and entered.

Response to Arguments

2. Applicant's arguments, see amendment filed 29 August 2007, with respect to the rejections made under Uchida *et al.* (7,110,112) have been fully considered and are persuasive. In view of the amendments to the claims incorporating allowable subject matter, the rejection of 1-3, 5, 15-17, 20, 23, 25-32 has been withdrawn. Regarding the rejections of claims 35, 37, 39, 41, and subsequent dependent claims, the previous rejections are still valid without the inclusion of the Uchida patent, as set forth below. Further, the rejection of claim 33 and corresponding dependent claims did not rely on the Uchida patent and no arguments were entered regarding this rejection. Upon reconsideration, the indicated allowability of claims 14, 19, and 47-49 is withdrawn in view of the previously cited prior art and newly discovered reference(s) to *Braunlich*. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 14, 19, 48, 49, and 66-68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention. Specifically, claims 14, 19, 48 and 49, as currently presented, are unclear as to the extent of the term, "pressure resistant", as they have been amended to have no specific reference range.

Corresponding dependent claims 66-68 are rejected by reason of dependency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19, 47-50, and 66-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Okazaki *et al.* (5,905,030).

With respect to claims 19, 47, 48-50, 66, 67-69 and 70, *Okazaki* shows the use of a device for measuring the components of a system (abstract) wherein the system includes an ATR body (total reflection absorption prism, 28) and a mid-IR light source (7 micrometers, column 6, line 40; infrared light source, 3), wherein the ATR body has two planar, parallel boundary surfaces (Fig. 1) and is transparent to measuring radiation in the middle infrared region (7 micrometers, column 6, lines 39-40) and light can undergo attenuated total reflection at least six times on at least one of the surfaces of the ATR (15 reflections, shown in Fig 1). With respect to the ATR body being pressure resistant, *Okazaki* teaches the use of an ATR body formed from ZnSe, which is commonly known to be a highly pressure-resistant material.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki *et al.* (5,905,030) in view of Braunlich (3,803,384).

With respect to claim 14, *Okazaki* shows the use of a device for measuring the components of a system (abstract) wherein the system includes an ATR body (total reflection absorption prism, 28) and a mid-IR light source (7 micrometers, column 6, line 40; infrared light source, 3), wherein the ATR body has two planar, parallel boundary surfaces (Fig. 1) and is transparent to measuring radiation in the middle infrared region (7 micrometers, column 6, lines 39-40) and light can undergo attenuated total reflection at least six times on at least one of the surfaces of the ATR (15 reflections, shown in Fig 1). *Okazaki* does not show the use of a flow-through cell as claimed, but the use of ATR bodies in flow-through testing systems is well-established in the art and would have been an obvious modification to one of ordinary skill in the art at the time the invention was made. *Braunlich* is cited as an example of a well known flow-through testing system.

8. Claims 33, 34, 37, 38, 53, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Okazaki*, in view of *Ashibe et al.* (5,772,606).

With respect to claims 33, 34, 37, 38, 53, and 57, *Okazaki* shows the use of a device for measuring the components of a system (abstract) wherein the system includes an ATR body (total reflection absorption prism, 28) and a mid-IR light source (7 micrometers, column 6, line 40; infrared light source, 3), wherein the ATR body has two planar, parallel boundary surfaces (Fig. 1) and is transparent to measuring radiation in the middle infrared region (7 micrometers, column 6, lines 39-40) and light can undergo attenuated total reflection at least six times on at least one of the surfaces of the ATR (15 reflections, shown in Fig 1). Further, *Okazaki* teaches the use of a ZnSe ATR prism, which is known to have an index of refraction higher than 1.5. However, *Okazaki* fails to show the system to be adapted to be included in a urinal, urinal pan, or urinal drainpipe. *Ashibe* shows a system for carrying out a urine test on a subject using a urinal with a measurement cell through which a light beam is directed and a sensor is provided for analyzing the urine contained in the cell (abstract). It would have been obvious to use the analysis system of *Okazaki* and *Uchida* in conjunction with a urinal such as that of *Ashibe* in order to use the analysis system to determine the qualitative properties and constituents of the urine of a subject for the determination of health conditions of the subject (*Okazaki*, column 13, lines 31-47).

9. Claims 35, 36, 39, 40, 55 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Okazaki* (5,905,030) in view of *Dou et al.* (5,815,260)

With respect to claims 35, 36, 39, 40, 55 and 58, *Okazaki* shows the use of a device for measuring the components of a system (abstract) wherein the system includes an ATR body (total reflection absorption prism, 28) and a mid-IR light source (7 micrometers, column 6, line 40; infrared light source, 3), wherein the ATR body has two planar, parallel boundary surfaces (Fig. 1) and is transparent to measuring radiation in the middle infrared region (7 micrometers, column 6, lines 39-40) and light can undergo attenuated total reflection at least six times on at least one of the surfaces of the ATR (15 reflections, shown in Fig 1), before being detected by a detector (5). Further, *Okazaki* teaches the use of a ZnSe ATR prism, which is known to have an index of refraction higher than 1.5. However *Okazaki* fails to show the system to be adapted to be included in a toilet. *Dou* shows a system for carrying out a urine test on a subject in which a toilet with a urine collection bowl is fitted with a system for analyzing constituents of collected urine (abstract). It would have been obvious to use the analysis system of *Okazaki* in conjunction with a toilet such as that of *Dou* in order to use the analysis system to determine the qualitative properties and constituents of the urine of a subject for the determination of health conditions of the subject (*Okazaki*, column 13, lines 31-47).

10. Claims 41-43 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Okazaki* (5,905,030) in view of *Bornstein et al.* (5,436,454).

With respect to claims 41-43 and 59, *Okazaki* shows the use of a device for measuring the components of a system (abstract) wherein the system includes an ATR body (total reflection absorption prism, 28) and a mid-IR light source (7 micrometers, column 6, line 40; infrared light source, 3), wherein the ATR body has two planar, parallel boundary surfaces (Fig. 1) and is transparent to measuring radiation in the middle infrared region (7 micrometers, column 6, lines 39-40) and light can undergo attenuated total reflection at least six times on at least one of the surfaces of the ATR (15 reflections, shown in Fig 1). Further, *Okazaki* teaches the use of a ZnSe ATR prism, which is known to have an index of refraction higher than 1.5. However, *Okazaki* fails to demonstrate the use of the system as a cannula, stent, or needle. *Bornstein* uses an ATR using Fourier transform infrared spectroscopy in an optical probe (abstract) or stent (stent and hollow needle, column 6, lines 29-35).

Allowable Subject Matter

11. Claim 1-3, 5, 7-13, 15-18, 20-32, 44-46, 51, 52, 60-65, 71 and 72 allowed.
12. Claims 54 and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 1, 7, 9, 10, 44, 54, 56, the combinations as applied above, in addition to other prior art made of record, do not disclose or reasonable suggest the use of quantum cascade lasers in ATR systems.

With respect to claim 24, *Okazaki*, as applied above, fails to show the use of a photoacoustic detector.

Claims 2, 3, 5, 8, 11-13, 15-18, 20-23, 25-32, 45, 46, 51, 52, 60-65, 71, and 72 are allowable for reasons of dependency.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Gaworecki whose telephone number is (571) 272-8540. The examiner can normally be reached on Monday through Thursday, 7:00-5:30.

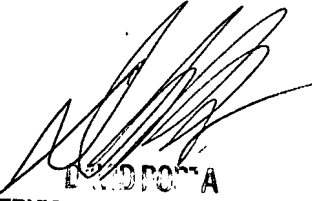
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/510,017
Art Unit: 2884

Page 9

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MG
31 October 2007



10/30/07
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